03050103-060

(Fishing Creek)

General Description

Watershed 03050103-060 extends through York and Chester Counties and consists primarily of ***Fishing Creek*** and its tributaries from Wildcat Creek to Great Falls Reservoir. The watershed occupies 136,173 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Cecil-Pacolet-Mecklenburg-Iredell series. The erodibility of the soil (K) averages 0.22 and the slope of the terrain averages 8%, with a range of 2-25%. Land use/land cover in the watershed includes: 71.2% forested land, 17.3% agricultural land, 6.0% urban land, 3.1% scrub/shrub land, 2.1% barren land, and 0.3% water.

This segment of Fishing Creek accepts the drainage from its upper reach and from Wildcat Creek (Tools Fork, Dye Creek), which originates near the City of Rock Hill. Taylor Creek enters Fishing Creek downstream of Wildcat Creek, followed by Stoney Fork, Browns Branch, and Clinton Branch. Further downstream, South Fork Fishing Creek (Love Creek, Conrad Creek) merges with Fishing Creek followed by Hicklin Branch (McFadden Branch), the Tinkers Creek watershed, Reeves Creek, and Dairy Branch near the Town of Fort Lawn. Lake Oliphant is located on a tributary to Conrad Creek. Fishing Creek empties into and forms the headwaters of Great Falls Reservoir. There are a total of 285.2 stream miles and 190.8 acres of lake waters in this watershed, all classified FW.

Surface Water Quality

Station #	Type	Class	Description
CW-006	S/W	FW	WILDCAT CREEK AT S-46-650
CW-212	S/W	FW	TOOLS FORK AT S-46-195 7 MI NW OF ROCK HILL
CW-096	S/W	FW	WILDCAT CREEK AT S-46-998 9 MI ENE OF MCCONNELLS
CW-224	S/W	FW	FISHING CREEK AT S-46-163
CW-697	BIO	FW	STONEY FORK AT SC 121 &72
CW-695	BIO	FW	TAYLOR CREEK AT S-46-735
CW-654	BIO	FW	FISHING CREEK AT S-46-655
CW-007	BIO	FW	SOUTH FORK FISHING CREEK AT S-12-50
RS-01007	RS01	FW	MCFADDEN BRANCH AT COUNTY ROAD 525, 7 MI S OF ROCK HILL
CW-008	P/W	FW	FISHING CREEK AT SC 223 NE OF RICHBURG
CW-233	W/INT/BIO	FW	FISHING CREEK AT S-12-77
CL-021	W	FW	LAKE OLIPHANT, FOREBAY EQUIDISTANT FROM DAM & SHORE

Wildcat Creek - There are two SCDHEC monitoring sites along Wildcat Creek, and recreational uses are not supported at either site due to fecal coliform bacteria excursions. There is a significant decreasing trend in pH at both sites. Aquatic life uses are not supported at the upstream site ***(CW-006)*** due to turbidity excursions. There is also a significant decreasing trend in dissolved oxygen concentration. Aquatic life uses are also not supported at the downstream site ***(CW-096)*** due to turbidity excursions; however, significant decreasing trends in turbidity and total phosphorus concentration suggest improving conditions for these parameters at this site.

Tools Fork (CW-212) - Aquatic life uses are not supported due to turbidity excursions; however, a significant decreasing trend in turbidity suggests improving conditions for this parameter. There is a significant decreasing trend in pH. There is also a significant increasing trend in total phosphorus concentration. Recreational uses are not supported due to fecal coliform bacteria excursions; however, a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

Fishing Creek **-** There are four SCDHEC monitoring sites along this section of Fishing Creek. At the furthest upstream site (***CW-224***), aquatic life uses are fully supported, and a significant decreasing trend in total phosphorus concentration suggests improving conditions for this parameter. There is a significant decreasing trend in pH. Recreational uses are not supported at this site due to fecal coliform bacteria excursions. At the next site downstream ***(CW-654)***, aquatic life uses are partially supported based on macroinvertebrate community data.

Further downstream (***CW-008***), aquatic life uses are fully supported. There is a significant decreasing trend in pH. Recreational uses are partially supported due to fecal coliform bacteria excursions; however, a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter. At the furthest downstream site ***(CW-233)***, aquatic life uses are fully supported based on macroinvertebrate community data. There is a significant decreasing trend in pH. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions.

Stoney Fork (CW-697) – Aquatic life uses are partially supported based on macroinvertebrate community data.

Taylor Creek (CW-695) – Aquatic life uses are partially supported based on macroinvertebrate community data.

South Fork Fishing Creek (CW-007) - Aquatic life uses are partially supported based on macroinvertebrate community data.

McFadden Branch (RS-01007) - Aquatic life uses are fully supported. Recreational uses are not supported due to fecal coliform bacteria excursions.

Lake Oliphant (CL-021) - Aquatic life uses are not supported due to pH and chlorophyll-*a* excursions. Recreational uses are fully supported.

Groundwater Quality

Well #	Class	Aquifer	Location
AMB-074	GB	PIEDMONT BEDROCK	GUTHRIES

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME* *PERMITTED FLOW @ PIPE (MGD)*	*NPDES#* *TYPE* *COMMENT*
FISHING CREEK CITY OF CHESTER/LANDO-MANETTA PLT PIPE #: 001 FLOW: 0.50	SC0001741 MINOR DOMESTIC
TOOLS FORK UTILITIES OF SC/COUNTRY OAKS SD PIPE #: 001 FLOW: .020	SC0039217 MINOR DOMESTIC
TOOLS FORK TRIBUTARY ADNAH HILLS MHP PIPE #: 001 FLOW: .040	SC0041670 MINOR DOMESTIC
TAYLOR CREEK MARTIN MARIETTA/ROCK HILL QUARRY PIPE #: 001 FLOW: M/R	SCG730061 MNOR INDUSTRIAL
CLINTON BRANCH PINETUCK UTILITIES/ PINETUCK SD PIPE #: 001 FLOW : 0.15	SC0041203 MINOR DOMESTIC
CLINTON BRANCH KENTUCKY-CUMBERLAND COAL CO. PIPE #:001 FLOW: M/R	SC0042129 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME *FACILITY TYPE*	*PERMIT #* *STATUS*
CITY OF ROCK HILL MUNICIPAL	261002-1702 (CWP-025, 461002- ACTIVE 1202)
CITY OF ROCK HILL MUNICIPAL	461002-1201 (DWP-901) ---------
COUNTY SQUIRE S/T LC DEBRIS CONSTRUCTION	462452-1701 (462452-1301) ACTIVE
POPE CONSTRUCTION C/C LANDFILL CONSTRUCTION	462424-1201 (CWP-002, IWP-165, -------- 462424-1601)
CLAWSON LAND CLEARING -------	462620-1701 ACTIVE
ARTHUR SHORT TERM C&D C & D	122901-1301 ---------

Mining Activities

MINING COMPANY *MINE NAME*	*PERMIT #* *MINERAL*
REA CONSTRUCTION CO. FISHING CREEK MINE INSTREAM DREDGING	0178-23 SAND
MARTIN MARIETTA AGGREGATES ROCK HILL QUARRY	0104-91 GRANITE
RAMBO ASSOCIATES RAMBO ASSOCIATES MINE	1112-91 SAND; SAND/CLAY
JAD LAND DEVELOPMENT, INC. DUNLAP RODDEY SOIL MINE	1275-91 SAND
BOGGS PAVING INC. JUDSON LAWRENCE PIT	1279-91 SAND

Growth Potential

The major development factor in this watershed is the southern and western portions of the City of Rock Hill. Portions of the towns of McConnells, Lowrys, Richburg, Fort Lawn, and Great Falls, together with the unincorporated communities of Edgemoor and Lando, are also located in this watershed. Water and sewer services are limited to the areas around Rock Hill and around municipalities along the S.C. Hwy. 9 corridor in Chester County. Industrial development continues to occur around the I-77/S.C. Hwy. 9 interchange near Richburg. The area around McConnells and Lowrys has a high level of agricultural activity. The potential for future development is greatest near Rock Hill and around the I-77/S.C. Hwy. 9 interchange.

Watershed Protection and Restoration

Total Maximum Daily Loads (TMDLs)

A TMDL was developed by SCDHEC and approved by EPA for several water quality monitoring sites in the ***Fishing Creek*** watershed including CW-224, CW-008, and CW-233 along Fishing Creek, CW-212 on Tools Fork, and CW-006 and CW-096 on Wildcat Creek to determine the maximum amount of fecal coliform bacteria they can receive from nonpoint sources and still meet water quality standards. The primary sources of fecal coliform to the sites were determined to be runoff from urban and pasture lands, failing septic systems, leaking or overflowing sanitary sewers, and livestock with uncontrolled access to streams. The TMDL states that a 97.4% reduction in fecal coliform loading from these urban and agricultural sources at monitoring site CW-212, a 79.5% reduction at CW-006, a 79.2% reduction at CW-096, a 72.3% reduction at CW-224, a 46.3% reduction at CW-008, and a 47.5% reduction at CW-233 are necessary for the streams to meet the recreational use standard. For more detailed information on TMDLs, please visit the SCDHEC's Bureau of Water homepage at http://www.scdhec.gov/water and click on "Watersheds and TMDLs" and then "TMDL Program".

Special Projects

TMDL Implementation for Fecal Coliform in the Fishing Creek Watershed, York County, SC

The Fishing Creek watershed lies in the north central quadrant of South Carolina and is designated as HUC 03050103-050, 060, and 070.The project was recently approved for funding under §319 and will get underway around the first of 2005. It will be implemented by a partnership of organizations including the York and Chester Soil and Water Conservation District, Clemson Extension Service, York County Government, USDA-NRCS, Chester and York County Cattlemen's Associations and Research Planning, Inc. Each partner will bring expertise to the project in order to implement the TMDL, which will reduce the load of fecal coliform bacteria in the watershed so that state water quality standards for this pollutant are met. Participants in the project will use local knowledge, sampling, and spatial data analysis to characterize sites in the watershed that have high fecal coliform loading. Best Management Practices and effective outreach activities will then be utilized to benefit water quality relative to cost on selected sites.

NPS Assessment and TMDL for Phosphorus in the Catawba River Basin

In June 2003, researchers at the University of South Carolina completed a §319-funded study of nutrient loading in the lower Catawba River basin using the WARMF (Watershed Analysis Risk Management Framework) water quality model. The model estimated that the lower Catawba (defined as the Catawba River downstream of the Lake Wylie dam and all tributaries through Lake Wateree) received an average load of 2100 kg/day of phosphorus for the 1996-1998 study period. Of this load, 46% was from point sources, 39% was from nonpoint sources, and 15% was from Lake Wylie. SCDHEC is currently using the WARMF model, which is being updated through 2003, to further refine nonpoint sources, to determine loading rates that would allow the reservoirs to meet the phosphorus standard (TMDLs), and to calculate wasteload allocations for phosphorus for the impaired reservoirs. Cooperators in the study include Catawba River stakeholders, North Carolina DWQ, and EPA Region 4.

Sustainable Environment for Quality of Life

Sustainable Environment for Quality of Life (SEQL) is a USEPA program, which addresses regional environmental planning through the Centralina Council of Governments and the Catawba Regional Council of Governments. SEQL is intended to assist local governments in the 15-county Charlotte/Gastonia/Rock Hill region to work together to promote economic growth while protecting the environment. Multiple air and water quality issues are analyzed simultaneously, while addressing transportation, water, land use, energy use, population growth and economic development. The Department has supported the program by providing air and water quality information. More information about SEQL is available at the following website: http://centralina.org/seql/background.htm